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The Association Between Perceptions of Daily Experiences
and Self- and Spouse-Rated Mood

9 Technical rept.

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and

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) A recent study by Rehm (1978) reported strong associations between the daily report of pleasant and unpleasant events and a global mood rating. This study examined desirable and undesirable events in an effort to replicate and extend Rehm's work by having 26 married couples complete a daily event and mood checklist about husbands for 14 consecutive days. The group averaging strategy generally used to describe event-mood correlations was compared to a tabulation of significant individual correlations. The observed correlations		

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>were consistent with a previous study of pleasant events by Lewinsohn and Graf (1973) and a study of unpleasant events by Lewinsohn and Talkington (1979), yet were considerably smaller than those reported by Rehm. Wives' ratings of their husbands' mood revealed the same relationships with experiences as did husbands' self-rated mood. Differences in the populations studied and the event and mood assessments between our study and Rehm's could account for this finding. A tabulation approach to the data showed that few subjects actually achieved statistically significant associations in contrast to the group approach which indicated small associations across all subjects.

The Association Between Perceptions of Daily
Experiences and Self- and Spouse-Rated Mood

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Running Head: Daily Experience and Mood

The Association Between Perceptions of Daily
Experiences and Self - and Spouse-Rated Mood

Lewinsohn and his colleagues have shown that experiencing pleasant events is associated with self-report of daily mood (Lewinsohn & Graf, 1973; Lewinsohn & Libet, 1971). Participants in one study completed the Pleasant Events Schedule (PES), a checklist of pleasant experiences modified for usage with community participants (Lewinsohn & Libet, 1972), and the Depression Adjective Checklist (Lubin, 1965) for 30 consecutive days. A $-.25$ correlation was observed between the daily report of number of pleasant events and the depressed mood scale. This finding confirmed similar relationships observed when PES and mood data had been collected in cross-sectional studies (Lewinsohn & Libet, 1972; MacPhillamy & Lewinsohn, 1974). The data have been interpreted by Lewinsohn and his colleagues as supportive of his well-known reinforcement theory of depression (Lewinsohn, 1974).

Until recently, however, the effects of unpleasant events on mood had not been examined. Unpleasantness may be a particularly important quality of daily experience given the findings that unpleasant life events consistently relate to both physical and psychiatric dysfunction (Dohrenwend & Dohrenwend, 1974; Johnson & Sarason, 1978; Mueller, Edwards & Yarvis, 1977; Vinokur & Seltzer, 1975). Rehm (1978) has recently reported studies which did include both pleasant and unpleasant events as predictors of daily mood. College students rated their mood with a ten-point scale (0 = worst mood ever, 10 = best mood ever) and recorded pleasant and unpleasant events in

diary format for 14 days. Correlations averaged over individuals were substantial: .65 and -.36 for the frequency of pleasant and unpleasant events with mood, respectively, in the first study and .51 and -.35 in a replication. Multiple correlations using both pleasant and unpleasant events as predictors yielded values of .70 in both studies. Lewinsohn and Talkington (1979) have also shown that unpleasant events, as assessed with their daily Unpleasant Events Schedule, are associated with Depression Adjective Checklist scores. Over a 30 day reporting period, depressives and control subjects had an average correlation of .29 between unpleasant events and mood scores.

Rehm's (1978) finding that 49% of mood variation was attributable to all events and that 34% was attributable to pleasant events alone is impressive, especially in light of the relatively small percentage of variation that Lewinsohn and Graf (1973) predicted using pleasant events (6%) and that Lewinsohn and Talkington (1979) predicted using unpleasant events (8%).

The present study was an attempt to gather further data on the relationship between daily experience and mood. Methodological refinements in the design of the study and in the instrumentation used for data collection were instituted to provide a more accurate estimate of the relationship between experience and mood. Specifically, a demographically heterogeneous sample of community participants was used to avoid possibly biased results from young, well-educated college students as used in Rehm's study. Checklist methods were used to collect both experience and mood data. These were chosen over diary-type and global rating methods because the presentation of standardized stimuli, inherent in the checklist method,

appears desirable given that the research materials are self-administered and the phenomena measured are complex (Masterson, 1975). The unipolar quality of "desirability/undesirability," which at face value is very similar to the "pleasantness/unpleasantness" quality used in Rehm's and Lewinsohn's work, was used to rate reported events. Mood was assessed with the Nowlis Mood Adjective Checklist (Nowlis, 1965) which provides 12 mood scales based on four-point ratings of 36 adjectives. Finally, unlike other studies which relied solely on self-assessment of mood, this study extended mood measurement to include spouses' ratings of target individuals' moods. Target individuals' event reports could then be correlated with spouse-rated mood, extending the analysis from solely self-report with the possibility of an association between measures due to rater response sets, to observer-report of mood.

Another issue explored in this paper is the method which has been used to analyze daily event and mood data. Typically, correlations have been computed for each subject across days. Tests of significance based on the mean and standard error of the correlations are then computed for the entire group, having first been transformed to Fisher's Z_s . The shortcoming of this method is that it is unclear whether or not a significant association between experience and mood for any individual has been achieved because individual correlations are not tested for significance. An appropriate significance test for individuals is based on the number of days used in the calculation of the coefficient. Thus, averaging individuals' correlations combines equally the information about nonsignificant and significant correlations. It is possible with the usual method to have an overall significant group

correlation, as tested with a t-test based on the mean and standard error of the individual correlations, when no individual coefficient is significant. This paper will compare results when the data are subjected to this analysis and to a tabulation of significant and nonsignificant individual correlations.

Method

Subjects. Married couples were solicited from local communities with both mailings to addresses randomly selected from the county telephone directory and advertisement in local newspapers. Payment of \$20 for participation was offered. Thirty-two couples were mailed questionnaires and 26 were returned and properly completed. The average age of male participants was 38 (range: 29-54). The median education category of males was 1-3 years of college and approximately equal thirds were in social classes I-II, III, and IV-V on the Hollingshead Two Factor Index of Social Position. Median household income was \$19,000. Despite the voluntary nature of the subject selection, these statistics correspond extremely well to equivalent statistics from the Census for the areas from which subjects came. Thus, although representativeness was not a consideration in subject selection, on the variables measured participants do reflect the relatively broad range of variability inherent in the generally middle class suburb in which they live.

Procedure. Several months prior to the daily recording period, couples completed a battery of questionnaires. During the two week recording period, a daily events checklist and the Nowlis Mood Adjective Checklist (the short version modified so that ratings were for the entire day) were completed by husbands about themselves and were completed by wives about their husbands.

The checklist consisted of 66 event categories representing a distillation of a large pool of daily events collected from another group of couples who had recorded "important" and "emotionally-laden" events for two weeks (Stone, 1978). This event checklist was comprised of 20 headings and sub-headings specifying general content areas: the six major headings were work-related activities, leisure activities, financial activities, family and friends, other happenings, and write-in, for events which were viewed as significant, yet were not included on the checklist. Checked events were rated in spaces opposite the items on two bipolar dimensions with 14-point adjective-anchored scales (desirability/undesirability and changing/stabilizing) and on one 7-point unipolar scale (meaningfulness). These three dimensions were obtained from a factor analysis of six event qualities related to the concept "stress" (Redfield & Stone, 1979).¹ Husbands were instructed to complete the form about themselves and wives about their husbands independently of one another at the end of the day for two weeks. Both forms were mailed the next morning to encourage daily completion (Stone, 1978).

Results

The average number of days couples completed the forms was 13.2 (range: 7-14) and husbands recorded an average of 5.9 events per day. For the remainder of this paper an event is called desirable or undesirable according to which side of the desirability/undesirability scale the husband used; following the approach of Rehm (1978) and Lewinsohn and Graf (1973), no distinction was made concerning the degree of rated desirability. Thus, the resulting sums of daily events are similar to the sums of pleasant and unpleasant events used in the previously cited daily mood studies. The means

and standard deviations for the event and mood data presented in Table 1 were calculated by averaging individuals' means and standard deviations, which are based on daily reports. Desirable events were reported 2-1/2 times as often as undesirable events.

Insert Table 1 about here

To facilitate interpretation and analysis of the mood data, the 12 Nowlis mood scales were factored allowing a smaller number of factor scores to represent mood in the correlational analyses. Males' and females' mood scale scores (N=346 days) were submitted to principal component analysis followed by orthogonal rotation (varimax). Three factors with eigenvalues greater than unity were derived for both males and females accounting for 60% and 57% of the total mood variation, respectively. Factor loadings of the 12 scales on the male and female factors are presented in Table 2.

Insert Table 2 about here

The pattern of loadings is similar for both sexes. Factor 1 is comprised of skepticism, aggression, anxiety, concentration, and sadness, and additionally of egotism for females only. We label this factor Negative Engagement (NE) given its negative mood and its action component (i.e., aggression, concentration). Conversely, Factor 2 is called Positive Engagement (PE) because of the high loadings on surgency, elation and social affection, and additionally of nonchalance and egotism for males only, indicative of positive mood, while the loading of vigor gets at the engagement component. The third factor accounts for roughly 10% of mood's variation, half

that of the previous two factors. Nonchalance and fatigue loaded positively on this factor, vigor loaded negatively, and concentration loaded negatively for males only. This factor was called Apathy (A). A linear combination of the 12 raw scores weighted by their respective factor-score coefficients produced three sets of factor-scores which were used in subsequent analyses. As some of the work cited in the introduction of the paper used depressed mood as the outcome, we have also included the Sadness scale in some of the forthcoming analyses. This was done in spite of the fact that Sadness loaded .77 on NE because it was still possible that NE would not adequately represent the scale.

Our first analysis followed the method used by Rehm (1978): correlations between husband-rated and wife-rated mood (the three factors and Sadness scale) and the number of desirable and undesirable events reported by husbands were computed for each couple across their daily reports for the two week reporting period. The 26 sets of correlation coefficients, a set of each couple, were transformed to Fisher Z s to normalize their typically skewed distributions for statistical testing (Cohen & Cohen, 1975). Mean correlations over couples were computed by averaging the Fisher Z s and transforming the resulting means back to correlations. These mean correlations are presented in Table 3 with the results of t-tests for significant deviation from zero. It should be noted that the average correlation between the number of desirable and undesirable events was .01 for the males. As can be seen from the table the direction of the mean coefficients is consistent with expectations from previous research. Namely,

Insert Table 3 about here

NE was directly related to undesirable experiences ($t(25)=6.37, p < .01$) while PE was related inversely to undesirable experiences ($t(25)= -4.42, p < .01$) and directly to desirable experiences ($t(25)=4.29, p < .01$). Apathy was not reliably associated with either experience. Furthermore, both the Sadness scale and the NE Factor had the same pattern of significance with events: Sadness was directly related to undesirable events ($t(25)=3.69, p < .01$) and not related to desirable events. Compared to NE, Sadness was less strongly related to events. The patterns of significant relationships were identical when wife (observer)-rated moods were correlated with husband (target)- reported experiences: NE with undesirable experiences ($t(25)=3.86$); PE with undesirable experiences ($t(25)=2.85$); PE with desirable experiences, ($t(25)=5.51$); and, Sadness with undesirable experiences ($t(25)=2.08$).

In contrast to the previous analysis which did not examine individual correlation coefficients, our second analysis tested individuals' coefficients with critical values based on the number of paired observations for each coefficient. Given the comparability of the results with NE and Sadness demonstrated in the previous analysis and Sadness's moderate factor loading on NE, we felt that Sadness would be adequately represented by NE, and only the mood factors are considered hereafter. The critical value at the .05 level of significance for a correlation with 14 observations required an absolute value equal to or greater than .53; for the couple with only 7 observations, the critical value was .76. Because only three subjects had fewer than 14 observations and only one subject had fewer than ten, we felt the differential criteria for significance would not adversely affect the results. Indeed, the criteria for significance are stringent given the relatively low power of the tests. Correlations between events and mood factors for all couples are found in Table 4.

Insert Tables 4 & 5 about here

A simple tabulation of the number of individuals achieving significant correlations between events and mood factors allows a direct comparison of this analytic method to the previous one. Additionally, with the tabulation analysis, both positive and negative correlations may be presented separately whereas in the previous analysis the signs of the correlations were obscured by the averaging procedure. Table 5 presents a summary of the number of individuals with significant correlations according to event class and sign of correlation for the three mood factors. The cells of this table corresponding to the significant relationships found in the previous analysis, i.e., desirable events with PE and undesirable events with NE and PE for males and females, are notable because they have either all negative or all positive significant correlations. The remaining cells have either combinations of both positive and negative significant correlations or few significant correlations. The strongest event-mood relationship had 10 of 26 (38%) individual correlations significant (desirable events with PE for females). Overall, the average number of significant individual correlations for those event-mood relationships reaching significance in the analysis was 5.5 (21%), a surprising small proportion.

It is possible that while neither desirable nor undesirable experiences taken alone could not predict mood scores, both types of experiences taken together might predict. To test this hypothesis, a set of multiple correlations were run. Desirable and undesirable experiences were used to simultaneously predict each of the six mood factor scores for each couple.

The multiple correlations for couples are presented in Table 5. Statistically, the multiple correlation must be at least as large as the larger of the two individual correlations with the mood scales and, because there are two predictors, the multiple correlation will usually be greater than the larger simple correlation. Our way of comparing whether the dual predictor strategy was better than single correlations at predicting mood factor scores was to examine the levels of significance of the regressions. Looking at significant regressions only takes into account the fact that two predictors are being used, and that they should account for more mood variation than by chance alone, by testing the multiple correlations with fewer degrees of freedom. If there are many instances when the regression strategy is significant, yet neither of the simple correlations are, then we would conclude that the multiple predictor strategy does a better job at accounting for mood variation. Tabulations of significant correlations from Table 4 reveal that: 19 times one or both of the simple correlations was significant, yet regression was not; 23 times one or both of the simple correlations was significant and the regression was significant; and, only once were both of the simple correlations nonsignificant and the regression significant.

Discussion

The summarization of the 36 Nowlis mood adjectives with principal components analysis yielded three readily interpretable factors accounting for approximately 60% of the variance. The factor structure was quite similar for husbands' ratings of their own mood and wives' ratings of their husbands' mood.

The correlations observed are comparable in magnitude to those Lewinschn and Graf (1973) and Lewinschn and Talkington (1979) found. Of the three Nowlis mood factors, only Positive and Negative Engagement had any relationship

to the report of daily experiences using analytic methods identical to those previously reported in the literature. Moreover, the relationships were not dependent on whether mood was self - or other-rated: the pattern of correlations was the same for both views of the targets' (husbands) daily mood. They do, however, fall far short of the strong relationships reported by Rehm (1978). Pleasant experiences in Rehm's study accounted for 34% of mood's variation, while desirable events in this study explained at most 12% of the variance.

With the averaging analysis, Negative Engagement was shown to be directly related to undesirable events, while Positive Engagement was directly related to desirable events and inversely related to undesirable events. The tabulation of significant individual correlations also demonstrated that PE was related to both desirable and undesirable events, and that NE was related only to undesirable events. For males, both the magnitude of the correlations and the number of significant individual correlations were similar for the significant relationships between mood and both types of events. For females, however, desirable events had a stronger relationship with PE than did undesirable events; this was also seen in the tabular analysis. Thus, a consistent finding for both males and females was that undesirable events were related to positive and negative mood factors, while desirable events were related only to the positive mood factor. The strengths of these relationships were generally comparable, although for females positive mood was related more strongly to desirable events than to undesirable events.

The similar findings of Lewinsohn's studies and this study, all of which used similar study designs, suggests that the methodological differences between these studies and Rehm's study explain Rehm's strong event-mood correlations. The free format recording and simple mood assessment used by

Rehm seems particularly prone to bias given the temporal proximity of event and mood recording. This bias was probably reduced with the more complex event and mood assessments used by this study and Lewinsohn's studies. Furthermore, telephone interviews conducted after this study revealed that none of the participants suspected that we were investigating the event and mood association lessening the possibility that the results are biased in favor of detecting a relationship. The target-observer procedure lead most couples to believe we were studying marital communications.

Analysis of the significance levels of the individual correlation coefficients observed on the three mood factors provided a somewhat different view of the same data - only a small proportion of the sample had actually achieved significant associations. At best, 33% of the target individuals had reliable correlations on any of the mood factors and on the average only 5.5% of the sample had significant correlations on each factor.

A regression approach to the data, wherein both desirable and undesirable experiences were used to predict mood, demonstrated fewer significant relationships compared with the simple correlations. This suggests that mood was related strongly to either desirable or undesirable experiences, and that there was not an additive effect of both types of experiences. It should be kept in mind, however, that with only 14 observations the test's statistical power, i.e., probability of achieving significance, was not great. Nevertheless, this ipsative approach implies that the association may be valid for only a small proportion of subjects, while the nomothetic approach implies a small association for most subjects.

The observed associations between events and mood are not meant to imply that event experience results in affect states. Although this is a plausible

hypothesis, no data have been presented which rule out several alternative hypotheses such as mood producing events or, as Coyne (1976) has suggested, a reciprocal process involving both events and mood mutually influencing each other over time. In lieu of experimental studies, a much closer analysis of the temporal relationships between mood and events, involving many measurements, has the potential of clarifying the causal issue.

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Footnotes

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Data from the dimensions changing/stabilizing and meaningfulness and from a symptom checklist, which was also completed by participants, was not analyzed here as the focus of this paper was desirability and undesirability of events and their relationship to mood.

Table 1

'Means and Standard Deviations for Husbands' Event Measures and Husbands' and Wives' Mood Scales

	Mean	Standard Deviation
	Males	(target individuals)
<u>Event Reporting</u>		
Desirable Events	4.25	2.00
Undesirable Events	1.67	1.45
<u>Wives' Mood Scales</u>		
Aggression	1.44	.55
Anxiety	1.47	.48
Surgency	1.73	.62
Elation	1.87	.63
Concentration	2.38	.69
Fatigue	1.47	.60
Vigor	2.30	.73
Social Affection	2.13	.64
Sadness	1.35	.49
Skepticism	1.39	.43
Envy	1.26	.36
Neuroticism	1.64	.52
Females (observers of targets)		
<u>Wives' Mood Scales</u>		
Aggression	1.39	.51
Anxiety	1.33	.47
Surgency	1.75	.55
Elation	1.85	.58
Concentration	2.26	.65
Fatigue	1.68	.61
Vigor	2.19	.67
Social Affection	2.35	.62
Sadness	1.27	.42
Skepticism	1.33	.41
Envy	1.21	.37
Neuroticism	1.71	.49

Table 2
Variables Marking Rotated Mood Factors
for
Males' and Females' Reporting About Males' Moods

Nowlis Mood Scales	FACTOR LOADINGS					
	Males			Females		
	1	2	3	1	2	3
Skepticism	.79			.72		
Aggression	.79			.71		
Anxiety	.79			.71		
Sadness	.77			.58		
Surgency		.83			.82	
Elation		.79			.82	
Social Affection		.78			.74	
Egotism		.45		.64		
Nonchalance		.42	.65			.67
Vigor		.57	-.61		.73	-.44
Fatigue			.59			.75
Concentration	.53		-.54	.54		
Variance Explained	25.5	22.3	12.1	23.3	23.6	9.7

Note. Factor loadings between -.40 and +.40 are omitted.

Table 3

Correlations Among the Daily Frequency of Desirable
and Undesirable Events and Husband and Wife-Rated
Mood Factors

	Males (targets)				Females (Observers)			
	Negative Engagement	Positive Engagement	Apathy	Sadness	Negative Engagement	Positive Engagement	Apathy	Sadness
Desirable Events	-.09	.28**	-.09	-.02	-.03	.35**	-.10	.04
Undesirable Events	.32**	-.24**	-.05	.23**	.25**	-.17**	.09	.15*

* $p < .05$

** $p < .01$

Table 4

Individual Correlations Between Daily Report
of Events and Mood Factors

S- CT	MALES									FEMALES								
	NE			PE			A			NE			PE			A		
	D	U	R	D	U	R	D	U	R	D	U	R	D	U	R	D	U	R
14	-.67	.58	.73	.68	-.67	.78	.31	-.28	.35	.12	.11	.23	.46	-.08	.49	.02	-.28	.31
14	-.42	.43	.48	.77	-.52	.78	-.72	.78	.85	-.28	.48	.48	.70	-.55	.72	-.60	.37	.60
14	.00	.25	.25	.48	-.59	.70	-.28	-.12	.33	.21	-.11	.23	.37	-.39	.50	-.18	.31	.34
14	-.30	.09	.30	.28	-.20	.29	-.11	-.35	.46	-.28	.08	.28	.65	-.18	.66	-.22	-.32	.52
14	-.20	.32	.34	.40	-.30	.45	-.15	-.43	.51	.11	.22	.28	.36	.11	.42	-.30	.02	.30
14	-.40	.71	.85	.48	-.62	.68	-.11	-.15	.18	-.04	.78	.79	.37	-.22	.45	.12	.21	.23
14	-.30	.56	.56	.44	-.57	.61	-.08	-.45	.55	.05	.40	.47	.33	-.54	.54	-.53	-.14	.67
13	.06	.50	.51	.66	.05	.67	.15	-.43	.45	-.16	.12	.20	.78	-.18	.79	-.37	.62	.71
13	.03	.67	.69	.21	-.06	.21	-.16	-.05	.18	.13	.28	.33	.55	-.10	.55	-.34	-.32	.50
13	-.05	.32	.32	.65	.03	.65	.21	-.56	.60	-.41	.51	.67	.45	-.48	.68	-.12	-.19	.22
14	-.13	-.26	.26	-.03	-.37	.40	.09	-.28	.37	.36	.43	.47	-.28	-.38	.40	.36	.06	.38
14	.20	.22	.36	.65	-.30	.66	-.46	-.11	.48	.12	.27	.35	.60	-.05	.62	-.11	.25	.25
7	.36	-.09	.39	.05	.31	.31	.53	.38	.61	.08	.63	.63	.29	.36	.43	.40	-.49	.69
14	-.28	.38	.41	.49	-.59	.67	-.14	.19	.21	.21	.01	.23	.01	-.02	.03	-.23	-.07	.28
11	-.11	-.02	.13	-.28	-.03	.32	-.47	-.63	.67	.01	.18	.21	.14	.17	.19	.02	.31	.35
10	.22	.39	.39	.08	-.10	.12	-.28	-.10	.30	-.23	.69	.72	-.01	.55	.55	-.45	-.55	.69
14	.15	.50	.55	-.17	-.25	.25	-.56	.39	.56	.19	-.03	.28	.66	-.70	.75	.19	-.03	.28
14	.19	.55	.63	.40	.01	.41	.33	.06	.35	-.28	.13	.29	-.20	-.37	.46	.20	.30	.40
13	.59	.39	.62	-.49	-.07	.51	-.10	.03	.13	-.04	.56	.63	-.09	-.27	.27	-.07	.31	.32
14	-.17	.40	.40	.56	-.22	.56	.34	.18	.47	-.47	.34	.51	.38	-.30	.42	-.07	.02	.07
14	.06	.41	.41	.28	-.46	.56	.47	-.24	.55	.32	.64	.70	.51	.34	.64	.50	.29	.56
14	-.16	.16	.25	.33	-.02	.34	-.47	.05	.50	.04	-.09	.12	.56	-.39	.77	-.18	.18	.29
14	-.59	.10	.59	.14	-.42	.42	-.22	-.24	.37	-.24	-.35	.48	.56	-.48	.67	-.24	.70	.70
14	-.36	-.09	.37	-.01	-.27	.27	.19	.55	.56	-.34	-.45	.55	.55	-.08	.56	.04	.12	.13
13	-.15	.37	.37	.12	-.15	.16	-.19	.26	.28	.14	.49	.60	.68	-.27	.68	-.77	.20	.77
14	-.02	.42	.42	.06	.25	.26	-.50	.19	.55	-.10	.08	.13	-.31	.35	.32	.31	.38	.42

* $p < .05$
 ** $p < .01$

Note. NE is Negative Engagement; PE is Positive Engagement; A is Apathy; D is the number of daily desirable events; U is the number of daily undesirable events, and, R represents the multiple correlation between both desirable and undesirable events and mood. The number following the subject ID is the length of the recording period for the subject.

Table 5
Frequencies of Significant Correlations
Between
Events and Mood Factors for Males and Females

	<u>Males</u>			<u>Females</u>		
Desirable Events	<u>NE</u>	<u>PE</u>	<u>A</u>	<u>NE</u>	<u>PE</u>	<u>A</u>
Positive <u>xy</u>	1	6*	0	0	10*	0
Negative <u>xy</u>	2*	0	2	0*	0	3
Undesirable Events						
Positive <u>xy</u>	5*	0	2	4*	0	2
Negative <u>xy</u>	0	5*	2	0	3*	0

Note The maximum N possible for each cell was 26. NE is Negative Engagement, PE is Positive Engagement and A is Apathy. Cells with *s indicate the expected relationships; there were no expected relationships for Apathy.

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